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P696

SEP 11 1916

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

SEPTEMBER 2, 1916.

WEEKLY STATION REPORTS
DRY LAND AGRICULTURE INVESTIGATIONS
September 2, 1916.

Reports for week ending August 26.

Amarillo.

This week has seen this section visited with the best rains so far this season. This will relieve the range situation and also do considerable good for those of the row crops not too far gone to be helped. Early Fall tillage operations on the station are now being pushed along rapidly and will be pretty much completed this coming week. The Panhandle Farmers Congress finishes a three day session here today, part being taken in the program by Farmer's and Agricultural experts from over the Panhandle and by officials from the state college as well as by agriculturists from adjoining states. Mr. H. H. Vinall of the Forage Office and W. D. Griggs from the Dalhart station are here for the meetings and also to visit the station.

Max. temp. for week 88 on the 21st; minimum 55 on the 24th. Hourly wind velocity 7.2 miles. Precipitation 2.68 inches. Evaporation 1.828".

Bellefourche.

Max. temperature 90; minimum 42. Precipitation .55 inch.

Corn and sorghum are looking well and prospects for a good crop are favorable. Some of the corn is beginning to dent and all of it will be out of the way of frost within three weeks.

Fall plowing was resumed the latter part of the week. The soil is in excellent condition for plowing.

Messrs. John S. Cole and F. L. Kelso visited the station during the week.

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Most of the week has been cool and wet. On Saturday night, the 19th., we had 1.76 inches of rain and on the night of the 22nd., 2.13 inches more, making a total precipitation for the week of 3.89 inches. This is the heaviest rainfall for any one week this season. Maximum temperature 93; minimum 56. Wind velocity 5.8 miles. Evaporation 1.28".

All crops not matured are growing rapidly and we expect to get good yields with most all those planted late. The varieties of millet planted on the 2nd of August are making rapid growth. The two varieties of proso are heading out, but will be short. Each week we have quite a number of visitors, many of them being from adjoining counties. Crops throughout the country have improved considerably since the recent rains.

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Max. temperature 95; minimum 49. Average hourly wind velocity (2') 6.2 miles, (8') 9.5 miles. Evaporation 1.929". Precipitation .52 inch.

Dean Jardine visited the station Friday.

J. B. Kuska leaves for Garden City August 26th., expecting to be gone three days.

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Edgeley.

With the exception of a couple days the week has been extremely cool for this season of the year. Heavy rains the first of the week prevented any threshing until about Friday. None has been done yet on the station. Work on the station has been confined principally to cleaning up around the yards, and mowing and putting up millet hay.

Max. temperature 85; ave. maximum 69. Minimum temperature 39. Precipitation 1.85 inches.

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Weather has been generally cooler with a hot day thrown in occasionally to break the monotony.

Most of the sorghums have not responded to the addition of the week's rain to the soil. Recovery from the effects of drouth is slow thus far and crops are apparently needing more rain badly. Chinch bugs are adding misery to the life of the sorghums. Grasshoppers are still feeding on the few heads the kafir has been able to produce.

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The past week has been cool and windy with only .04 inch of rain. Corn is burning badly on some plats chief among these being the corn plats which had manure applied to them. Corn on summer fallow, M. C. C, is the best looking of all now, though early in the season it was about the poorest.

During the week stubble plats were disked in an effort to eradicate black bind week which is gradually spreading through the rotations. Summer fallow was gone over with the spring tooth harrow.

Mr. George W. Morgan of the Assinniboine Field Station spent two days at this station this week.

Maximum temperature 91; minimum 45. Precipitation .04 inch.

North Platte.

Considerable cooler weather has prevailed during the week. Only one maximum went up above 90 and the minimum on the 22nd went down to 47. .74 inch of rain fell on the 21st. Stubble ground is now wet down to a sufficient depth to plow well.

Russian Thistles are making a very vigorous growth. Stubble fields are badly infested and it is difficult to do a good job of disking. Thistle growth will make it difficult to seed wheat in the corn fields this fall.

Scottsbluff.

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Thrashing was completed. The uniformly low yields are an indication of the unfavorable season we have had. Fallow plats suffered more from hail than did others. Maximum yields were as follows:-

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Woodward.

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Garden City.

The weather for the week has been much cooler than usual and most of the sorghum crops are making a rapid growth. Some of the kafir and milo on the D. L. A. plats is heading, but unless frost comes at a late date the former crop will probably not mature.

All roadways on the D. L. A. project were throughoughly disked during the week and drilled to winter rye. There is sufficient moisture present to germinate the seed and make some growth before fall.

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Many of the late crops in this vicinity have been infected with red rust and the resultant yields are sure to be light. Threshing of early spring grain is started and yields from 30 to 40 bushels have been reported.

Among the recent station visitors have been Messrs. Chas. and J. Allen Clark of the Office of Cereal Investigations, Mr. Dan Hansen and E. G. Noble of the Office of Western Irrigation Agriculture, Dr. H. L. Shantz and Mr. Piemiesel of the Office of Alkal and Drought Resistant Plant Breeding Investigations. Mr. F. E. Cobb of the shelterbelt inspection work has had considerable work in this locality and has been at the station at odd times the past two weeks.

Lawton.

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During the week cowpeas that have been harvested for seed yields were flailed out and weighed up. To date, Early Buff planted May 4th., have given the heaviest yield of seed, this yield being 20 bushels of seed per acre. Most of the cowpeas have become infested with weevil while in storage and have been treated with carbonbisulphide.

Lawton, Continued.

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SEPTEMBER 9, 1916.

WEEKLY STATION REPORTS
DRY LAND AGRICULTURE INVESTIGATIONS
Sept. 9, 1916.

Reports for week ending Sept. 2.

Akron.

The millet varieties were weighed during the week. They have all been injured by drought, the Sudan grass and cane sown broadcast have been injured more than the millet.

A hail storm the evening of August 26th split the leaves of the cane and corn on the Station and almost destroyed several fields three and four miles east of here. There is no corn in the immediate vicinity of the station but there are fairly good fields in localities in the county that have been favored by local rains.

Mr. H. P. Gould of the Office of Horticultural Investigations, and Mr. C. W. Warburton of Cereal Investigations visited the station during the week.

Maximum temperature 86, minimum 45. Precipitation .91 inch.

Amarillo.

Cloudy weather with moderate temperature and wind has prevailed here this week. Since the rains of two weeks ago the sorghum crops have picked up a good deal. Even the corn has revived more than was though possible and a large number of ears are being developed. Weeds also are doing well and on the stubble plats to be left over till spring the thistles will have to be cut out with a mower and burned. There is talk of a large acreage to be put into wheat again this fall throughout this section. However, the substantial agricultural interests of the Panhandle are continuing to emphasize the importance of scientific livestock production, through the medium of the sorghums. One of the speakers at a recent banquet here in Amarillo said,"There are a few men today who can begin to appreciate the fact that time alone is necessary to see upon the broad plains of the fifty odd counties of the Panhandle a livestock production equalling and in many respects surpassing the present livestock development of Iowa and other parts of the Middle West, for Irdian corn and hogs and cattle, and they alone have made Iowa a great prosperous rich state. And kafirs and the hog and the cattle and dairying are to duplicate like results upon our plains lands. We will some day and that not far off, supply no small part of the pork, butter, poultry and beef consumed upon the tables of the American people."

Weather for the week was - Max. temp. 86, minimum 54. Hourly wind velocity 6.1 miles. Precipitation .19 inch. Evaporation 1.562 inches.

Mr. A. A. Potter of the Cereal Office is here looking after sorghum smut work. B. E. Rothgeb left yesterday, Sept. 1, for Washington, D. C.

Archer, Reports for the weeks ending August 5, 12 and 19.

Aug. 5.

The weather for this week has been:- Max. 38, minimum 54, average mean 68. Evaporation 1.115 inches. Precipitation 1.07 inches. Average wind velocity 6.2 miles. For the week ending Aug. 12 the weather was as follows:- Max. 85, min. 51, ave. mean 63. Evaporation .799 inch., precipitation 2.80 inches. Ave. wind velocity 5.6 miles.

For the week ending the 19th temperatures were as follows:- Maximum 84, minimum 50, and average mean 67.

The warm weather of July was modified by cooler weather in August. The protracted drouth which begun about June 1 was ended abruptly on the 9th by a hail and rainstorm amounting to 2.64 inches in one afternoon. The hail did damage which was estimated on oats, which were nearly ripe, at 30 per cent. Wheat was not affected nor was the flax, but corn leaves were somewhat shattered. A high per cent of this rain went in to the soil and wet it down to a depth of about a foot, but it is deeper now, as more recent rains have come. The winter wheat and barley, which were then in the shock are sprouting badly. This rain did not come soon enough to help small grains, but it has put the soil in splendid shape for fall plowing.

All the small grain and flax are now in the shock or bin. Threshing has begun, but as the writer left Archer before it began he can say nothing accurately as to yields. It appears as though the average yields of wheat and oats will be about 1/2 of that of last season.

Weeds have been more of a problem at this station this season than ever before, Russian thistles being the worst of all.

Corn was in the hard roasting ear stage when the writer left there on the 25th, and stands a good show of maturing enough to germinate.

Effects of previous crops and methods of tillage were decidedly apparent this season.

A wooden tank is being set up for a water supply and water system being laid. The dairy barn is being improved by putting in a concrete floor, a feed trough and steel stalls and stanchions for 14 head of cattle.

Mr. McMurdo of the Cereal Office visited the station on the 23 and 24th.

Ardmore.

Maximum temperature for the week 87; minimum 46. Precipitation .13 inch. Total precipitation for the month 1.90 inches.

All early fall plowing of plats has been completed, and considerable land which is used for field crops. The surface eight inches of the ground is very dry, but a disc plow works very nicely under such conditions in the heavy soil of this section.

All varieties of Millet were harvested about a week ago. The yields varied from one and one-half to three and one-half tons per acre.

Corn and sorghums are ripening very rapidly. Harvesting these crops probably will commence next week.

Colby.

The past week has been cool and cloudy for the most part. There have been showers but no general rains. Some of the neighboring towns, however, report rains heavy enough for fall plowing. Milo and kafir are about half headed. They are heading very uneven this year owing to the fact that germination was not at all uniform. The remainder of the corn plats will be cut next week as they are drying considerably. Most of the week was spent in cleaning up the roads and weedy places about the station. The Russian thistles are a real pest this year.

Max. temp. for week 92, minimum 48, average hourly wind velocity (2'0 6.1, (8') 7.7 mi., evaporation 1.385", precipitation .54 inch.

Weather for August:-Max. temp. 104 on the 3rd, minimum 48 on the 27th, mean maximum 91-1915 79, mean minimum 60-1915 56, average hourly wind velocity 6.8 mi.-1915 3.7, evaporation 9.930"-1915 5.444", precipitation 1.48"-1915 4.17", normal 2.33 inches.

Edgeley.

Threshing was begun on the station last Tuesday. The most of the grain is turning out uniformly poor, both in yield and quality. None of the wheat plats in the rotations have yet been threshed but that which has been threshed yields from 3 to 12 bushels, the most of it averaging around 5 or 6 bushels per acre, and weighing from 30 to 45 pounds to the bushel. All of the barley has been threshed, the Rotation and M. C. plats averaging 21.3 bu., while the average of all plats was 19.9 bu. per acre of rather light stuff. Oats are exceedingly poor. Only a few of the Rotations have been threshed, but on those the yield runs from 4 bu. to 19 bu. per acre, while they weigh only around 20 pounds to the measured bushel.

The weather has been quite favorable with the exception of a light shower Thursday evening which delayed work for half a day.

Precipitation .13 inch. Max. temperature 83, minimum 37.

Garden City.

Frequent showers during the week and favorable temperatures have kept sorghum crops growing rapidly. The seed on some of the kafir plats replanted in June, has just come up.

With the surface soil well filled with moisture we will be able to secure an excellent seed bed for winter wheat and rye.

Weeds on unplowed small grain plats are again making a good growth. An endeavor will be made to prevent these from seeding, by mowing, as they are just now in bloom.

Mr. J. B. Kuska of the Colby station, visited this station on the 28th and 29th.

Max. temp. for the week 90; minimum 50. Average wind velocity 2' ane. 6.0 mi., 8' ane. 8.8 miles. Evap. 1.708", precipitation 1.06 inches.

Hays.

Weather has been generally cool, with occasional hot days, and small showers at night.

Max. temp. 94.5; minimum 47. Precipitation, total of three showers .51 inch.

Very little change in crops,-sorghums continue heading slowly and rather poorly.

The first of the week 25 of the men from the station took a day off and made an auto trip to note the progress of the farmers and especially to visit a twelve thousand acre ranch about 100 miles from the station. A good time was had and the men all felt as if the day was profitably spent.

Lawton.

The weather has been much cooler during the last week and the drought from July 20th., to August 31st was broken by a rain of .82 inch, on the 31st.; .34" on the 1st., and .18" on the 2nd., or a total of 1.34". Most of this rain came slowly and practically no run-off occurred. The ground was extremely dry and badly cracked and the present rain-fall will give only temporary relief. However, it will afford an opportunity to put the wheat ground in shape for seeding and ought to insure fairly good germination on ground that has had previous tillage. The rains were not heavy enough to make stock water and farmers are complaining about the shortage.

Some cotton is being marketed at the present time but the crop throughout the country is light. The price is ranging from 14½ to 15 cents at Lawton. The Market reports show 17 cents at Ringling, Oklahoma.

The cotton plats on the station seem to be revived since the rains and there are some small bolls in the tops of the plats that may make something under favorable conditions. The Half & Half selections are opening now. King and Trice opened about a week ago and a very small picking was made.

Most of the kafir fields will be harvested within a few days.

Mandan, Report for week ending August 26.

The harvesting of vegetable crops continues daily. Cucumbers and sweet corn are at their best and are giving good yields. Tomatoes and egg plant have also yielded well since July 20th. Notwithstanding the unfavorable spring season, practically all of the vegetable crops have been successfully grown. The small fruits also fruited well. Some of the raspberry varieties produced an average of a quart of berries to the plant. The new varieties of everbearing berries are giving some fall fruit.

Threshing continues.

Maximum temperature 87, minimum 50. Precipitation 1.31 inches.

Mandan, Report for week ending September 2.

Charles H. Clark returned to the station on the first. Dr. B. T. Galloway arrived on the second for a several days' visit.

Early watermelon varieties are ripening. Should we have two more weeks that are free from frost all the vine crops will mature considerable fruit. The deciduous trees are ripening up the season's growth much earlier than last year. The ash trees had ceased growing and formed their terminal buds on August fifteenth. The seedling trees and rooted cuttings can be pulled two weeks earlier than last year. Tree cuttings can also be made early.

Mr. Frank N. Meyer, Agricultural Explorer of the Office of Foreign Seed and Plant Introduction, visited the station on the 27th and Dr. Humphrey, of the Office of Cereal Investigations, visited us on August 26th and 27th.

All threshing is completed.

Wheat yielded 15 - 30 bushels
Barley " 18 - 35 "
Flax " 12 - 17 "
W. Rye " 22-bushels.

Maximum temperature 90, minimum 42. Precipitation .06 inch.

North Platte.

Temperatures for the week have been about normal. .84 inch of rain has fallen.

First date of seeding of winter wheat was put in yesterday, Sept. 1. Filling of Station silos was begun during the week.

August weather summary as follows:

	Bench	Table	Normal
Avg. Maximum temperature	87.6	85.7	
Avg. Minimum "	58.9	60.2	
Mean	73.2	72.9	72.2
Hourly wind velocity	4.4	5.8	
Evaporation	7.017	7.518	
Precipitation	2.47	2.88	2.40

Scottsbluff.

Three showers amounting to .69 inch were favorable for corn. Indications for the crop are good. Can is making remarkable growth.

Early fall plowing was completed during the week.

Excepting February, August is the only month so far that has had an excess of precipitation over the 21 year average. Evaporation was normal.

Sheridan.

The weather continues dry, and temperatures are slowly getting lower at night. The prairie is dry enough to burn, but the feed is good, as the grass has matured naturally and cured standing. The cattle men are beginning to move their cattle to the fields from the range for fall pasture. Before the prospects of a railroad strike became so acute a good many beef cattle were being shipped from the range. Cattle are in excellent condition.

The roads are very dry and the dust is getting deep. The field of sorghum on this station is about the only green crop in the country, on dry land. It stands about shoulder high and has been headed out for ten days.

The Mess House is completed and is used as such. The Barn and Implement Shed is nearing completion, the painting being finished this week. The Office Building is being plastered and Painted. The Residence is being shingled and is lather ready for plastering, and the brick work is being put in place. The pressure tank is buried and the foundation for the well house is finished. The water system is being connected to the tank today. The sewer trench is all open for laying the pipe.

Excavation is being done for a bridge from the station to the county road. The temporary bunk house is torn down and the material from it is being used in the construction of the well house.

Tucumcari.

Max. temp. 87 on the 29th.; minimum 55 on the 27th. Average hourly wind velocity 4.2 miles per hour. Evaporation 1.651". Precip. none.

Precipitation for August was 4.43 inches which added to the precipitation for the previous months brings this years rainfall to 8.94". The precipitation for August was 1.67 inches above normal, but on the 31st we were still 3.33 inches below normal for the entire year - up to date.

During the week all rotation and C. C. Row-cropped plats, except beans and cowpeas were cultivated and a good start made on row variety crops. The orchard has been cultivated this week. Russian thistles were mowed from the small grain plats and their yield will much exceed that of the wheat and oats which were harvested in July. About five acres of land in the southwest corner of the lower field was staked off and the land is now being prepared for trees. We use a disc-harrow, set to cut wide and deep and make several "rounds" in every row. This cuts out a ditch as wide as the disc and about 2 feet deep in the middle. The object is to prevent run-off and to bring the water close to the tree. By the time the roots have grown out much the ditches will have been cultivated full.

Two plats of Sudan grass were mown this week. The edges of the public road running through the farm were mowed of weeds. The orchard was given a superficial pruning to clean out dead branches and excessive summer growth, and to force bearing.

Many crops will be ready to harvest before long. Cowpeas are about ready and most sweet sorghums will be ready within a week.

Dalhart.

All of the crops have made a good growth during the past week. The late planted crops and those that did not come up until after the June rains are heading out. The total precipitation for the month of August was 3.45 inches and while this rain came too late to be of any benefit to the corn it has practically insured a crop of the sorghums, however, it is going to cause these crops to mature later than usual and there will be some danger from early frost. The yields will not be as good as last year but will be above the average.

Maximum temperature for the week 88; minimum 50. Precipitation .30 inch.

The two sheds 32 x 16 feet which were being added to the barn were completed during the week.

Woodward.

The past week has been cool and cloudy and threatening rain, and a few small showers have occurred. These were just enough to germinate weed seed without doing crops any good.

Harvest from now on will be rapid. Most of the grain sorghums, while not ripe are burning badly and may as well be cut.

What can be done toward the preparation of ground for winter wheat is being done. Farmers are most of them discing their land, which is they practicable method until rain comes.

Messrs. Goll and Olmstead were here the fore part of the week taking pictures and choosing exhibit material for the Soils Products Congress at El Paso.

NOTE.

All field men who have not yet turned in their transportation requests for the fiscal year 1916, will please do so at once.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

SEPTEMBER 16, 1916.

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

SEPTEMBER 15, 1915

WEEKLY STATION REPORTS
DRY LAND AGRICULTURE INVESTIGATIONS
September 16, 1916.

Reports for week ending Sept. 9.

Akron.

The past week has been warm and dry. All the corn on the rotations was cut on the 8th. There are no ears except on the plats continuously cropped to corn and summer fallow. The corn was cut with the mower as it was too short to bind. The other corn on the station will not be harvested as there is no grain and the fodder is badly burned by drought and had been injured by hail.

Maximum temperature for the week 91; minimum 52. Precipitation .01".

Amarillo.

This week has been fair with considerable wind. The time has been spent mostly in routine station work-soil sampling, hoeing weeks, note-taking and office work. Harvest of grain and forage crop sorghums has commenced. Preparation is in progress for the Panhandle State Fair to be held here next week. Messrs. Coll and Olmstead of the Department were here early in the week making arrangements for exhibits from this station for the Farming Congress at El Paso next month. They also took a number of photographs around over the station for the same event.

Ardmore.

Maximum temperature for the week 95; minimum 47. No precipitation. The days have been very dry, windy and hot. As a result corn and all forage crops are maturing very rapidly. The yield of corn will be good-probably an average of over 40 bushels per acre. About 20 bushels of Northwestern Dent has been field picked for seed. We started cutting corn and forage crops on September 9th.

Bellefourche.

The weather for the past two weeks has been clear and warm almost continuously. As a result corn is practically all mature and the sorghums are ready to harvest.

With the exception of the three plats to be plowed after the corn has been removed, all fall plowing is finished.

Threshing reports from around the county indicate that there will be very little marketable wheat in this section. A field of winter wheat on disked stubble produced the best quality of grain of any marketed in newell this fall.

Maximum temperature 98; minimum 46. Precipitation .05 inch.

Big Springs, Report for week ending Sept. 2.

Maximum temperature for the week 90; minimum 62. Precipitation .40". Evaporation 1.408". Wind velocity 5.2 miles per hour.

The past week has been very favorable for crop growth and all the late planted crops are growing rapidly. Kursk millet, planted on the 2nd of August, is headed at a height of about two feet and German millet, planted on the same date, is beginning to head at a height of about 20". Some varieties of cotton are beginning to open. The first picking of Trice cotton was made on August 31st.

Messrs. H. N. Vinall, R. W. Edwards and A. E. Cron from the Office of Forage Crop Investigations visited the Station on August 29th.

Big Springs, Report for week ending Sept. 9.

Maximum temperature for the week 89; minimum 66. Wind velocity 7.3 miles. Evaporation 1.9 inches. Precipitation none. This week has been cool and dry with the lowest minimum we have had since some time in the spring. All crops, with the exception of those that had matured, are growing rapidly. June corn planted on June 21st has grown something over two feet during the past two weeks and will make a fair crop of corn. The boll worms are doing a lot of damage to the young cotton bolls, and on some plats will reduce the yield one-half. As the eggs are deposited on or in the surface of the boll by the moth, it is hard to get much result from spraying. The German millet planted on August 2nd, is heading out and will make a fairly good crop. The 3rd cutting of Sudan grass is about ready to harvest. The weeds have been growing in abundance since the recent rains, and we are unable to cope with them, especially in the plats where the crops have matured to such an extent to prevent cultivation. The cowpeas in the rotation and variety plats were harvested during the week, and we hope we can get them in before it rains. Ten automobiles loaded with visitors visited the station on Saturday afternoon, most of those included in the crowd were teachers in the Big Springs High School. After listening to a short talk explaining the work being carried on by the station, the visitors were served watermelons which were raised on the station this season. A trip around the farm ended their visit, and as many of the teachers are new ones from other states, they seemed interested in the work carried on.

Colby.

This has been a hot week for September. The temperature went above 90 on four days. The drouth remains unbroken, delaying winter wheat seeding. Some of the earlier sorghums such as feterita are well headed and will mature before frost if it comes near the normal time. Most of the plats to be in winter wheat were double disked this week. Seeding will be done about the 15th.

Maximum temperature 97; minimum 52. Average hourly wind velocity (2') ane. 7.4 miles; (8') ane. 10.7 miles. Evaporation 1.164". Precip. .18".

Dalhart.

All of the crops are making a good growth and are maturing rapidly but are about two weeks later than last year. The weather during the past week has been warm with enough wind to hasten the maturity of the crops. The earlier varieties of the grain sorghums and the early planted plats will probably be ready for harvest the latter part of next week. Considerable damage is being done on several of the plats by birds, amounting in some cases to as much as twenty five per cent. The Suday grass has been cut for hay but will be light except on land previously fallowed. Seed crops will require about two weeks of favorable weather yet to mature.

Maximum temperature for the week 94; minimum 58. Precipitation .10".

Mr. Goll and Mr. Olmstead visited the station for the purpose of taking pictures and arranging for an exhibit at El Paso, Texas.

Garden City.

We have had another week of favorable growing weather, and kafir and milo heads are filling. More moisture is needed in most cases to hasten the maturity of these crops.

Listed plats for winter wheat and rye were leveled during the week; and soil samples taken on the moisture reduction millet and irrigated dry land mulch plats.

The winter rye seeded on the roadways of the D. L. A. project will have to be reseeded as most of it has been destroyed by grasshoppers.

Dr. Miller completed his water requirement work and transpiration studies for this year on the 6th. This is about ten days earlier than the work was concluded last year.

Maximum temperature for week 95; minimum 58. Average wind velocity 2' ane. 8 miles; 8' ane. 12.1 miles. Evaporation 1.820". Precip. .14 inch.

Hays.

Maximum temperature for the week 99.5; minimum 51. Precipitation .02".

Sorghums developing slowly. There is to be found on some of the better plats considerable mature seed, but on the majority of the plats there is but little mature seed. Many of the plants will never head. Chinch bugs are killing some of the plants.

Weeds - mostly Russian thistles - which have made considerable growth on stubble plats not to be plowed until spring, were mown and hauled off to prevent scattering of seed over the project.

All early fall plowed and fallowed plats for winter wheat and rye were double harrowed on the 5th.

Huntley, Report for week ending Sept. 2.

Little field work has been done during the week. A plat of alfalfa -Rot. 42E- and a plat of brome grass-Rot. 41E- were crowned and fall plowing for winter grain was started. The ground is very dry and only a fair job of plowing can be done. Fall plowing for spring grains will be postponed for a little while in hopes of a rain.

Maximum temperature 94; minimum 45. Precipitation .06 inch.

Huntley, Report for week ending Sept. 9.

Ground was prepared for winter grain and rye and wheat were sown. Stand counts were taken on corn plats and some seed was selected. As soon as a corn binder can be secured the crop will be harvested. Though the days remain quite warm the temperature at night drops near the freezing point.

Maximum temperature for the week 94; minimum 36. Precipitation trace.

Lawton.

The weather has been pleasant during the last week and the minimum temperature has ranged closely to 68, the maximum being 94 during four days of the week. A shower amounting to .28 inch fell on the 7th.

On the 4th sweet clover was seeded in Rotation 134-D and 133-D. Crimson clover in rotation 154-B and Alfalfa in rotation 142-B. The ground was in fair shape for seeding at this time. An examination of the seed during the latter part of the week showed that the seed was beginning to sprout. The shower which fell on the 7th will aid germination considerably. On the 6th the first seeding of winter wheat and winter barley was made in the rate and date of seeding test to be carried on with the following grains: W. Wheat, W. Barley, W. Oats, Spring Barley and Spring oats.

The rains during the latter part of August and the first of September have caused quite a growth of volunteer grain on some of the plats and in some of the fields. Practically all stubble ground was disked after harvest but the seed did not germinate after the heavy rain on the 20th. of July.

Kafir corn on the M. C. series was harvested on the 4th of September. The indications are that M. C. H which had a top dressing of manure in the spring will give the best yield.

In addition to the above work mentioned the week has been consumed in hauling fodder, grading lawns, taking soil moisture samples and plowing.

Mandan, Report for week ending Sept. 9.

No frost occurred during the week and as a consequence the corn crop is sufficiently mature to escape damage by frost.

The fall plowing is under way. The vine crops are maturing fruit rapidly. On one day during the week 152 ripe watermelons were gathered from a 1/5 acre patch.

Dr. B. T. Galloway is spending a few days at the station.

Maximum temperature 94; minimum 52. Precipitation .58 inch.

Sheridan.

Another week has passed without rain or frost. The nights are getting pretty cool and frost is expected at any time now.

The field of sorghum is headed and stands slightly more than three feet in height. It will be cut the fore part of the coming week. It has not yet suffered from drouth, except in a few small areas.

Work has been progressing slowly on the buildings during the week, although work has been in progress. A bricklayer, a painter and a plasterer have been at work on the Office Building and Residence all of the week. The brick work will be finished today on both buildings and the plasterer has practically finished work on the Office Building and has begun work on the Residence. The painter has two coats on the outside of the Office and is applying the third coat. The concrete floor has been run in the Office Building and inside finishing is in progress.

All of the land plowed during the summer is now being double disked, preparatory to the seeding of winter wheat. The location of the permanent corner of the rotation plats were found and the concrete corners will be run soon.

The well house which will contain the electric plant and water system is being built and will be finished to painting soon. The foundation for a chicken coop has been run and work on it will soon begin.

Two big forest fires are raging in the mountains near here, and the forest service have 90 men fighting it. It has burned over 49 square miles and is burning on a 7 mile front, in thick timber. It is beyond control without rain.

Woodward.

Rainfall amounting to .48 inch occurred September 8th.

During the past two weeks shrubbery which has kept alive all summer has showed signs of suffering extremely although some of it has been watered every few days. The hot dry air for so long a period has evidently been too much for it. It is in distinctly better condition where it has been protected by buildings from the full sweep of the wind. Rather a large amount of nursery stock was planted by farmers this spring and most of it is dead.

Harvesting of sorghums and cowpeas is being done, and most of the land on the station is ready for the planting of winter rye and wheat whenever conditions are such that it is thought best to plants.

For protection of some of the sandier parts of the station the planting of oats is being considered. These should make a heavier fall growth than winter wheat or rye. They will probably die during the latter part of the winter. In the orchard where rye would have to be plowed up in the spring, oats will be more easily removed.

Edgeley.

Threshing has been completed on the station with the exception of the barley on rotation 9, some sweet clover, and the flax. The average, highest, and lowest yields are as follows:-

Crop.	Average Yield	Highest Yields		Lowest Yields	
Wheat	8.8	12.5	71H	3.8	MCB
Oats	22.1	40.3	72H	4.1	Rot. 3
Barley	21.3	25.6	MCA	17.7	MCB

The weather has been rather unfavorable for threshing, with frequent showers and high winds. The corn is looking good, and with a little more time without frost will mature a good crop.

Maximum temperature 82; minimum 45. Precipitation .43 inch.

Note:

It has been decided that under the appropriation bill for the fiscal year 1917, field men will be reimbursed for hire of automobiles while on official business.

It has also been decided that field men will be reimbursed for gasoline and oil consumed in privately owned motor driven vehicles while on official business, but in submitting vouchers it will be necessary to specify the date of travel, the distance travelled and the exact amount of gasoline and oil consumed while on official business. Any of the field men of the Office of Dry Land Agriculture who anticipate using their own automobiles or motor-cycles on official trips, and desire to claim such reimbursement, will kindly advise this office so that their Letters of Authorization may be amended accordingly.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

SEPTEMBER 23, 1916.

Reports for Week ending September 16.

Amarillo.

The week was ushered in with a rain of 1.15 inch that fell in two hours last Sunday night. Lowering temperatures have followed this event, the maximums falling from 92 early in the week to 65 on the 14th., when a cold wind prevailed from the North all day. The minimum likewise hit a downward grade from that of 65 on the morning of the 10th to 40 on the morning of the 15th. Moderation set in yesterday with South wind. For the most part the sky has been clear, the hourly wind velocity was 7.3 miles and evaporation 1.924 inch.

Corn on the D. L. A. plats appears to be slow maturing being still in the roasting ear stage. Milo is ripening fast and will probably be harvested this coming week. Kafir is well headed out and in the flowering and milk stage. Considerable branching has come on in both since the rains of a month ago and on several outside plats especially much damage by birds is noted.

The Panhandle state fair has been well attended and exhibits of both agricultural products and livestock are splendid. Herefords among cattle and Durocs among hogs predominate although there are some fine specimens of Shorthorn and Angus cattle as well as Poland China and O. I. C. hogs entered. Some fairly fancy prices were brought out at the auction sales. For instance a coming two-year old Hereford bull brought $1600 and a pen of 20 yearling heifers was sold for $1600. The heavy weight in hogs was a 900 lb., Poland China Boar. Sheep and poultry entries also were creditable. All in all, the showing especially for a year like this speaks well for the possibilities for the Panhandle country. In quality the livestock show ranks with that of the Royal at Kansas City.

Big Springs.

Maximum temperature 92, minimum 50. Wind velocity 5.0 miles per hour. Evaporation 1.82 inches. Precipitation .63 of an inch. The week has been partly cloudy and cool. All crops are maturing rapidly and are making good growth. The third cutting of Sudan grass was made during the week; the sorghum in the C. C. and rotation plats was also harvested during the week. The height of this sorghum will average from 6 to 9 feet. The cowpeas were hauled in and the yield secured ranged from 1000 lbs to the acre up to 3550 lbs. Mr. F. L. Goll and Olmstead visited the station during the week in interest of exhibit material for the Dry Farming Congress which meets in El Paso, Texas in October.

Colby.

The week has been exceptionally cold, especially the last few days. One night the minimum thermometer registered 32, but there was no sign of frost, and the thermograph showed a minimum of 34. The corn has been hauled in and the plats which had ears were husked. Plat M. C. A was plowed and harrowed for winter wheat Tuesday and the other plats which were quite rough were harrowed preparatory to seeding. The wheat will be sown Monday. There is practically no moisture in the surface soil in any of the plats.

Max. temp. 94, minimum 32. Evaporation 1.771". Precip. .14 inch.

Dalhart.

The different crops are ripening very slowly and the only plats that have ripened enought to harvest at the present time are a few corn plats, that matured early on account of drought, and some Sudan grass for hay. Some winter rye that was seeded two weeks ago on land that has been fallowed during the summer is coming up well and a good stand has been secured. On the rotations where winter rye is used following other crops the seeding will be later this year than usual on account of the lateness of the preceding crop.

The weather has been cool and the temperatures low during the nights. Maximum temperature for the week 85; minimum 40. Precipitation none.

Edgeley.

A hard frost on the evening of the 14th killed all tender vegetation. Harvesting of the corn was begun on the 15th and all of the D. L. A. plats were finished the next day. The yield of fodder is good, and there are a few ripe ears, though notmany.

The weather was cold and cloudy the most of the week, with frequent light rains, just enough to delay field work and prevent threshing. Plowing was begun the first of the week. The most of the fertilizer plats were finished, but none of the rotations have yet been plowed.

Maximum temperature 73; minimum 27. Precipitation .31 inch.

Garden City.

There was a marked decline in temperature for the week, and sorghum crops made very little advancement toward maturity. On the 15th there was a light frost in some localities in the river bottom but no damage was done. It now seems very doubtful whether any of the later sorghums will mature any grain.

All of the winter wheat and winter rye plats were seeded on the 15th and 16th. All roadways were also reseeded to winter rye. The surface soil is well filled with moisture and will carry the crop through the winter and early spring in good condition. However, we received more precipitation at the station during August and part of Sept. than was received generally over this section.

Max. temp. for week 93; minimum 37. Average wind velocity 21 ane. 8.3 miles, 81 ane. 12.4 miles. Evaporation 2.085". Precipitation .59".

Huntley.

Over an inch of rain in one shower put the ground in good condition for plowing which was done early in the week. Most of the seed corn has been gathered preparatory to harvesting the crop. The first frosts of the season occurred this week; temperatures of 31 and 30 degrees coming on the 14th and 13th, respectively. Mr. Rabild, Mr. Scott and Mr. Parke of the Bureau of Animal Industry have been at the station the last two days locating building sites and making general arrangement for livestock work which will be started here next year. Max. temp. 77; min. 30. Precip. 1.14".

Akron.

The past week has been rather cool. A light frost occurred Thursday night and Friday and Saturday were spent in cutting forage crops.

The Washington County Old Settler's Association held their annual picnic at the Station Thursday, but owing to the cool weather there was a very small attendance, about 800 being present. A colt show was held in connection with the picnic.

Maximum temperature for the week 84; minimum 30. Precip. .21 inch.

Lawton.

With the exception of the first two days the past week has been unusually cool, especially al night. On the 15th. and 16th. the minimum temperature was 48 and 46 respectively. A shower of .18" fell on the 11th.

Sweet clover, crimson clover and alfalfa seeded on the 4th. of Sept. does not indicate a very successful stand at the present time. Very few plants have appeared above the surface of the ground and unless a rain improves the present prospects another attempt will have to be made at seeding when conditions are more favorable to germination.

Winter barley planted in the rate of seeding and date of seeding test on the 6th. of Sept. showed a good stand on the 11th. Winter wheat planted on the same date is rather slow in coming up.

Half-&-half cotton is opening in advance of other varieties and the first picking will be made on the 18th. All of the cotton yields will be very light. Lone Star which is used in the rotations does not show any open bolls at the present writing. The boll worms are doing considerable damage to the cotton bolls, especially on Rotations 274 and 275.

Winter wheat, winter barley, and winter oats were planted again on the 15th.

The 11th. and 12th. were spent with the County Agent and the District Leader in looking over some cotton varieties grown near Ryan just north of the Red River. The 200 acre field which was inspected was nearly all planted to Half & Half. However, among the few varieties that were being tested out there the Acala looked very promising. A boll showing an inch and one half staple was not difficult to find.

This cotton field is yielding about one half bale of cotton to the acre and that is far better than any thing we saw on the trip.

North Platte.

Report for two weeks ending Sept. 16. Maximum temperature 94 (5th), minimum 32 (15), mean 65.7. Precipitation .91". Evaporation 2.911". Average wind velocity 5.13 miles per hour. The first frost of the season occurred on the night of the 14th. No injury has been observed except to vine crops.

Work of filling silos on the station was completed yesterday.

Wheat seeded September 1 is up with a good stand. Late fall plowing of plats is about completed.

Mandan.

Messrs. Helmer Rabild, Assistant in Charge of Dairy Farming of the Dairy Division, B. A. I., Mr. M. F. Parks, in Charge of the construction of buildings in the Dairy Division, Mr. G. A. Scott, Assistant in Animal Husbandry and State Agricultural Commissioner Flint visited the station on the fourteenth.

One field of about ten acres of corn has been cut during the week. Also all varieties of sorghums. Harvesting of corn will be commenced the coming week.

A heavy frost occurred on the night of the fourteenth when the minimum temperature was 23. This was the first frost of the season. The corn had passed the danger point fromfrost.

Fall plowing is practically complete in the rotations, with the exception of those plats which grew a crop of corn this year.

Dr. Galloway left for points in California on the 11th., on which date Messrs. Peterson and Pfaender also started on a trip to Ottawa, Boston and points East.

Max. temperature 79; minimum 23. Precipitation .05 inch.

Scottsbluff.

We had our first frost of the season when the temperature dropped to 30 degrees on the 14th. The corn had been cut two days before and was in the shock, but irrigated corn was still immatured. As a result, there will be considerable soft corn in the valley.

The last frost in the spring was May 16th., giving us a season of 122 days, five days shorter than the five year average.

Alfalfa seeded in the roads is not doing so well on account of grasshoppers and cool weather.

Sheridan.

There is still about two or three days work on the Barn and Implement Shed before it will be complete, and probably a week to work on the Office Building. Plastering is nearly finished on the Residence.

The water system has been connected up and is being used. There were no leaks found in it and it is working in a satisfactory manner. The pump and its engine were set in the pit under the well house, where the tank and water pipes are located, during the week.

The first frost came on the night of the 14th, and the sorghum is being cut. It was not badly hurt the first night of the frost. The rotation plats have all been disked and are now being laid out for seeding to winter crops. The permanent corners, set in concrete were put in this week.

ucumcari.

Maximum temperature for the week 92; minimum 45. Average hourly wind velocity 5.1 miles. Precipitation none. Evaporation 1.891 inches.

During the week 4 acres of land set aside for hog pasture work was broken. No hogs were pastured this year as the land which was to be used was broken out late this spring and due to the dryness of the season no stands of crops were secured until too late in the season.

The second pulling of broom corn was made this week. There will be one more small pulling. Broom corn yields to equal or go above our average will be secured.

Milo, feterita and some few other grain sorghums have sent out new heads on suckers and this will delay the harvesting of some of the plats for a time. It is doubtful if there is time for these suckers to mature before frost.

Quite a number of farmers have visited the station recently and are taking a good deal of interest in what we are doing. Off to one side of the field we have one 66-foot row planted to each of the varieties of crops grown in the plat field and this is interesting as well as instructive to visitors.

It is quite likely that our kafir will be far enough advanced by the end of this coming week and that we will fill our silos with it.

TE:

It is requested that all field men of the Office of Dry Land Agriculture advise this office when they have completed their seasons work in the field and are ready to leave their stations and report to Washington.

It is also requested that they advise this office at the same time such annual or official leave as they may desire to take en route, using the "Application for Leave while Traveling on Official Businsess" form provided for that purpose.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

SEPTEMBER 30, 1916.

Reports for week ending Sept. 23, 1916.

Bellefourche.

The potatoes in rotations 75 and 76 were dug on the 23rd. The yield was nearly one hundred fifty bushels per acre.

Winter wheat and winter rye were seeded Sept. 21st. The soil was so dry that no grain will come up until after a rain.

The weather of the past week has been very favorable for field work and nearly all fall work is completed.

Max. temp. for week 87; minimum 28. No precipitation.

Colby.

This week has been cool and dry with very little wind till today. The winter wheat and rye were sown this week. They cannot come up before a rain falls as there is no moisture in the upper four inches in any of the plats. Moisture samples were taken on twenty of the plats during the week. Yesterday and today were spent in filling the two station silos. It took all the sorghum, milo, and kafir to fill the silos this year whereas last year one fourth of that acreage was sufficient.

Maximum temperature 87; minimum 36. Evaporation 1.499". No precipitation.

Dalhart.

The weather during the past week has been dry and warm and the crops are maturing rapidly. Several of the milo plats were harvested during the past week and all of them will probably be ripe enough to cut and put in the shock and all of the Sudan grass that will be cut for hay is in the shock. Sudan grass for seed will be ripe enough to harvest within the next few days. The kafirs are maturing rather slow and it is probably that they will require about two weeks to mature. The yield of all of the grains will be less than last year, but there will be a large amount of feed crops to harvest. Silo filling is in order of the day among the farmers and while all of the silos will be filled only a few new silos have been constructed this summer.

Max. temp. for week 89; minimum 46. Precipitation none.

Edgeley.

Dry weather, tho at times cloudy and with high winds, prevailed through the most of the week. All of the fertilizer plats have been plowed, and work has been started on the rotations. All threshing on the station has been completed with the exception of some alfalfa which is yet to be cut.

Maximum temperature 84; minimum 29. Precipitation none.

Havre.

Threshing which was started on the first was finished today. The Ellis Keystone grain separator which was shipped to this station had not been in use for two or three years and so was in need of repairs that had not been anticipated before starting. The machine had not been used very much and did very good work after it was put in shape. The new Root and Vender Vorden 8 hp. engine did very good work when in proper adjustment. The power is very good and the trucks so built that it is not necessary to block it up while in use. It also has a small lever on the governors for adjusting the speed without stopping the engine that has proven very convenient. The adjustments seem to be rather sensitive and easily to get out of order. Rain since September 1 amounting to 1.76 inches recorded on 5 days stopped threshing for a few days.

The following gives a summary of the yields obtained:

Crop	Yiled		
	Minimum	Average	Maximum
Winter wheat	25.5	38.0	52.8
Spring wheat	42.0	49.3	56.0
Oats	66.3	89.8	110.0
Barley	54.9	66.4	80.2
Flax	18.4	19.5	20.7

The temperature dropped to 30 on the 14th which killed the leaves on the corn plants. Since that time the ears have been maturing very rapidly and the most of the rotation plats are well along in the dent stage at present. We will get plenty of seed corn and unless it freezes soon there will be enough mature corn to gather and weigh. The corn has made a very good growth of fodder this season and has never suffered for want of moisture during the season. The corn in the community is not as far advanced as it was this time last season.

Yields from some of the late grain crops in the locality are reported as being lighter than was anticipated, as a result of rust. On the earlier crops the yields are ranging from less than 10 to more than 50.

Plowing for winter wheat is completed and the rotation plats will be seeded the coming week.

Garden City.

We had splendid growing weather throughout the week and considerable of the kafir and milo is maturing grain; some , however, is drying up. A rain now would be of no benefit whatever to any of the sorghum crops.

Wheat and winter rye have emerged and a good stand has been secured on all plats except plat A of the MC.

Garden City, Continued.

Some of the field water requirement stuff was weighed and threshed; while the mature heads on the kafir and milo plats were harvested to prevent loss of grain by sparrows. They bother our grain sorghums but very little until heads reach maturity, and by keeping most of these heads harvested we can save a great portion of the grain.

Dr. S. Fortier of the Office of Public Roads and Agricultural Engineering visited the station today (the 23rd).

Maximum temperature for week 92; minimum 43.

Average wind velocity 2' ane. 5.3 mi., 8' ane. 7.9 miles.

Evaporation 1.554 inches. Precipitation .20 inch.

Huntley.

The chief field work of the week consisted in harvesting the corn on the rotations. A fair yield of grain is expected but the total yields will be low due to short stalks and badly burned foliage. Winter wheat and rye are up and a good stand secured. The rain of a week ago has germinated weed and grain seed and a heavy growth is being made.

Max. temperature for the week 85; minimum 30. Precipitation trace.

Lawton.

The past week has continued cool and pleasant. However, the country is badly in need of rain for satisfactory seeding of winter wheat and to increase the supply of stock water. A good many farmers are seeding wheat now for the purpose of early pasture. Due to dry weather and an excessive supply of chinch bugs throughout the country the seeding of winter grains is not very encouraging at present.

Weather conditions have been ideal for cotton picking and the crop is rapidly being placed on the market while the prices ranges close to 15 cents per pound. A good many cotton fields are yielding only about 4 bales to 20 or 25 acres. The weather has been a little too cold for rapid development of the top crop which started after the late rains the last of August.

Tillage was applied during the week to the plats in the permanent rotation work.

Plowing:	Disking:
M. C. A wheat.	M.C.-C Broomcorn, sorghum, milo, Kafir & Feterita.
M. C. B&E Broomcorn, Sorghum, Milo & Kafir.	L.M. A & D Kafir
M. C. B Feterita.	273 & 274 D
201-B	133 & 134 D
255-A	Listing: L.M. B,C,&D Kafir.
256-A	
276-C	

The ground was so hard and dry that it was decided to delay listing the rest of these plats until better work could be done.

Mandan.

Backsetting of landbroken during the summer is in progress. Harvest of corn was started this week. Very high winds prevailed on two days and blew a large percent of the corn down which makes cutting very difficult. Indications are that corn is going to give excellent yields.

The soil is now very dry making plowing rather difficult.

Maximum temperature 85, minimum 30, and precipitation 0.

North Platte.

Fair weather with warm days and cool nights has prevailed during the week. No frosts have occurred.

Corn on the Dry Land Rotation plats has been cut. The crop will be light. Winter wheat and rye seeding on the plats will be finished today.

Potatoes have been dug. The average yield on dry land was 60.3 bushels per acre. The highest yield under irrigation on the station was 97 bushels per acre. The crop is light in this section.

Scottsbluff.

We have had only .43 inch precipitation so far this month. As a result the soil is very dry. Winter wheat and rye planted on the 19th will not sprout until moisture comes.

A start was made on fall plowing, but as the hay and potatoes harvest is on, we let plowing wait for the present.

The temperature went down to 30 again on the 21st.

Sheridan.

The contract on the barn and implement shed was finished this week, and work is being done on grading up the approaches to the doors and putting in the water line. The air pump on the water system has been installed and the finished lines are in use.

The concrete for abutments for a bridge on the road entering the station from the county road has been run. The material for the bridge is on the ground.

The contract on the office building is practically completed with the exception of the door to the vault which has not yet arrived. Work is now in progress on the inside finish of the superintendents residence.

The weather remains dry and the ground seems dryer than the weather. The last rains of any consequence to fall here was about the middle of June. It will take considerable rain or snow to make fall breaking possible.

All of the fall seeding on the rotations and variety work was finished this week after the sodd had been disked and harrowed twice. It is hoped that there is enough moisture in the soil to germinate the grain although it is doubtful.

Tucumcari.

Maximum temperature 89, minimum 50, average hourly wind velocity 3.3 miles per hour, precipitation .14 inch, and evaporation 1.349 inches.

During the week several plats of sorgos were harvested, alfalfa was cut the second time, one plat of milo was cut, preparations were made for filling our silos, and including this morning (the 23rd) about 15 plats of cowpeas were cut for hay and a number of plats of variety cowpeas were also cut and will be threshed out later. Cowpeas of the Whippoorwill variety are making three large cocks to each 1/10 acre plat - giving promise of being as large an acre yield as has ever been obtained here.

Cotton is doing very well this year and a good deal of it is opening. Cotton seems to be about two weeks early this year but all other crops are from two to four weeks later. If frost occurs on or before the average first frost date, most of our kafir and variety grain sorghums will be caught by it. All except two (replanted) plats of milo have been seriously injured by birds, on some of the milo plats almost 3/4 of the grain has been eaten, the birds seem to be most bothersome while the grain is still in the milk or in the soft dough.

Tucumcari is becoming quite a wheat market. A firm has built a 20,000 bushel elevator at this point and has been purchasing most of the wheat which formerly was hauled south to the Sante Fe Ry. The wheat district lies about 35 miles south of Tucumcari -making the marketing of the wheat very expensive.

Woodward.

The principle work on the station over the past two weeks has been the planting of winter wheat and rye in the roads and vacant places. It also was determined to plant the check plots to rye. This will greatly aid in the prevention of blowing, and will give a considerable amount of early hay. Practically all rye and wheat have come up in the past few days. Within a week it will be impossible for the wind to get a sweep over any large areas free from vegetation. Little trouble is contemplated from blowing during the winter and spring. Oats were planted in the orchards.

The one trouble contemplated from planting rye and wheat as extensively as has been done is that it will form a harbor for chinch bugs which will go from these crops onto the rowed crops.

We have so far this month received 2.61 inches of rain and have had much cool weather, so the conditions are very good for the starting of the fall crops.

The summer months were so dry that farmers were unable to plow and wheat is going in mostly on land which has grown weeds all summer and has recently been disced.

The early kafir 472 has made a better showing this season than others and it is hoped that it will be much better for the farmers of this section than either the old standard which does not ripen, or the dwarf which does not give a good forage yield.

Note:

Attention of the field men is invited to memorandum of the Chief Clerk of the Department, concerning rules to be observed in the shipment of packages exceeding 4 pounds in weight. Order No. 9887 issued by the Postmaster General, referred to by the Chief Clerks Memorandum is also quoted. Field men will please observe these instructions in the future when mailing packages. These orders will also make it necessary for this office to divide some of the future consignments for the various field stations from this office.

"Your attention is further directed to letter of Sept. 16th, enclosing Order No. 9887 issued by the Postmaster General, under date of August 18th. The Third Assistant Postmaster General has advised this office that when packages of merchandise or similar matter exceed four pounds in weight, the postage on the entire weight must be paid. This ruling does not apply, however, to printed or written matter described in Paragraph 2 of the order, when shipped from Washington,D.C.

As the appropriation for postage will be insufficient to meet the extra burden placed upon it by this order, the executive officers of each bureau, division and office should instruct employees concerned to divide heavy consignments, whenever, possible, so as to come within the weight allowed to be mailed under the penalty privilege. All packages weighing over four pounds should be shipped by either express or freight."

(Signed) R. M. REESE,
Acting Chief Clerk.

ORDER OF THE POSTMASTER GENERAL.

Office of the Postmaster General,
Washington, D. C., Aug. 18, 1916.

Order No. 9887.

Section 499, Postal Laws and Regulations, is amended to read as follows:

Section 499. No article or package exceeding 4 pounds in weight shall be admitted to the mails under the penalty privilege unless it comes within the exceptions named in the Acts of June 8, 1896, chapter 370, 29 Stat., 262, and June 26, 1906, chapter 3456, 34 Stat. 477. (Act of May 18, 1916, Sec. 11, Pub. 81).

2. The exceptions referred to in the preceding paragraph embrace only single books, books and documents published or circulated by order of Congress, printed or written official matter emanating from any of the departments of the Government or from the Smithsonian Institution mailed at Washington, D. C., and postage stamps, stamped envelopes, newspaper wrappers, postal cards, and internal-revenue stamps. Official matter exceeding 4 pounds in weight which is not embraced within these exceptions shall not be accepted for mailing free of postage under a

Penalty envelop or label, but, if it does not exceed the limit of weight prescribed by Section 462, shall be accepted, provided postage is paid thereon at the rate of the class to which the matter belongs.

Paragraph 4, Section 463, Postal Laws and Regulations, is annulled and paragraph 3 of that Section is amended to read as follows:

3. Printed or written official matter weighing in excess of 4 pounds, emanating from any of the departments of the Government or the Smithsonian Institution, shall be accepted for mailing under a penalty envelope or label at the post office at Washington, D. C., only. Such official matter weighing more than 4 pounds, but not exceeding the limit of weight prescribed by Section 462, may be accepted for mailing at other post offices only when postage is prepaid thereon. For further information with respect to the acceptance of official matter see Section 499.

(Signed) A.S.Burleson,
Postmaster General.

OTE.

As all purchases of furniture are being standardized and are being secured from dealers under contract, it will be necessary for all such purchases to be made through the central office at Washington. Field men are requested therefore not to make any purchases of furniture in the field under their letters of authorization, but to request such purchases through this office. The same regulations apply also to the purchase of cameras and camera lenses.